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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,452	06/26/2003	Naoyuki Enjoji	TOW-030	9395

959 7590 07/26/2005

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EXAMINER	
MARTIN, ANGELA J	
ART UNIT	**PAPER NUMBER**
1745	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/608,452	ENJOJI ET AL.	
	Examiner	Art Unit	
	Angela J. Martin	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/13/05;6/26/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by St. Pierre et al., U.S. Pat. Application Pub. 2003/0186093 A1.

Rejection of claims 1-5 and 11,12 drawn to a fuel cell; claims 6-10 drawn to a method of controlling a fuel cell.

St. Pierre et al., teach a fuel cell comprising cell assemblies having a plurality of unit cells, each of the plurality of unit cells has a membrane electrode assembly including a solid polymer electrolyte membrane interposed an anode and cathode (sect. 0014), the assemblies having reactant gas passages and coolant passages connected in series with each other (sect. 0007); a fuel gas outlet/inlet passage extending between unit cells and connecting with fuel gas passages (Fig. 6); and a fuel gas adjusting mechanism connected to the fuel outlet/inlet passage for controlling the flow rate and direction of the fuel gas (sect. 0018, 0031, 0083). It teaches an oxygen-containing gas adjusting mechanism for controlling the flow rate and direction of the oxygen-containing

gas (sect. 0018, 0021, 0031, 0083; Fig. 6). It teaches a coolant adjusting mechanism for controlling the flow rate and direction of the coolant (sect. 0019, 0032, 0099). It teaches at least two of the unit cells are juxtaposed (sect. 0007, 0048). It teaches an oxygen-containing gas adjusting mechanism for controlling temperature, relative humidity, and flow rate of the gas (sect. 0018-0021). It teaches a coolant adjusting mechanism for controlling the temperature and flow rate of a coolant (sect. 0019, 0032, 0099). It teaches a method of controlling a fuel cell comprising the step of controlling a fuel gas flowing through fuel gas passages, and adjusting the temperatures and relative humidities of the cell assemblies with a fuel gas adjusting mechanism (sect. 0018). It teaches the step of controlling an oxygen-containing gas flowing through oxygen-containing gas passages, and adjusting the temperatures and relative humidities of the cell assemblies with an oxygen-containing gas adjusting mechanism (sect. 0018). It teaches the step of adjusting the temperatures and relative humidities of the cell assemblies with a coolant adjusting mechanism (sect. 0019, 0022, 0032, 0033). It teaches controlling reactant gases and coolant to operate unit cells into which the coolant is initially introduced at a startup time of the cell assemblies (sect. 0011).

Thus, the claims are anticipated.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kawamura et al., U.S. Pat. Application Pub. 2004/0142221 A1, teach a fuel cell system comprising a flowmeter, temperature sensors and a control unit

in which flow control functions of hydrogen, oxygen, and cooling water have been preset. Katagiri et al., JP 2002-117880, teach a fuel cell device comprising a humidifier for reaction gas. Rappaport et al., U.S. Pat. 6,794,068 B2, teach a series flow of coolant and the advantages of a series flow with respect to temperature and humidification.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela J. Martin whose telephone number is 571-272-1288. The examiner can normally be reached on Monday-Friday from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AJM

MARK RUTHKOSKY
PRIMARY EXAMINER